

## All COR ISO Recommendations

### Latent Condition, Seismic and ISS

Friday, October 12, 2012 11:39:05 AM

Type	Rec #	ABU	Unit	Year (I/R)	LC or ISS Question #	LC Question ISS Question Seismic Area	Observation	Recommendation	Resolution	Duc Date	Assigned To	Status
Latent Condition	432	D&R	DHT	2006	4-1	Are the communications facilities between process units adequate for clear and uninterrupted communications during both normal and emergency situations [e.g., telephone land lines, radio, computer network, and E-mail, and are systems redundant and/or secu	Face-to-face in the CR, radio and telephone in normal and emergency situations. In an emergency, we have the AllCall and red phone systems. Radios are not effective in an emergency due to the high volume of radio traffic.	Consider re-installing the D&R repeater on the roof of the Control House or another solution to the radio communication issue.	This reco will be addressed under RISO IS 462 4 Rhen due to the same reco.	9/1/2006	Tydingco, James D.	Completed
Latent Condition	433	D&R	DHT	2006	4-3	Is the communication capability between operators, and between operators and the control room or other necessary locations adequate during normal operations and emergencies?	Face-to-face in the CR, radio and telephone in normal and emergency situations. In an emergency, we have the AllCall and red phone systems. Radios are not effective in an emergency due to the high volume of radio traffic.	Consider re-installing D&R repeater on roof of Control House or another solution to the communication issue.	This reco will be addressed under RISO IS 462 4 Rhen due to addressing the same issues.	9/1/2006	Tydingco, James D.	Completed
Latent Condition	434	D&R	DHT	2006	4-2	Is communications equipment adequate for the number of persons or stations who must communicate with each other?	Need more radios and to upgrade the base station to enable simultaneous use of the handset and the speaker.	More radio handsets are needed and the base station should be upgraded to enable simultaneous use of the handset and the base station speaker.	This reco will be addressed under RISO IS 462 4 Rhen due to the same issues being addressed.	9/1/2006	Tydingco, James D.	Completed
Latent Condition	435	D&R	DHT	2006	3-34	Are emergency shutdown switches guarded against inadvertent operation [consider location, switch operation, and guards or covers]?	The ESD switches are in a common location look similar and it is possible to inadvertently turn the wrong switch	Consider improving the identification of each switch. Review the possibility of eliminating unneeded switches to permit greater separation between switches.	The nature of the switches themselves make operation by accidental bumping almost impossible. This has to do with how they are mounted, the amount of force required to turn the switch, the fact the switches are round, and the length of the switch travel in order to change the contact position. Adding switch covers was also reviewed, but covers will not help operators identify one vs. another and may in fact make the switches harder to see and use. PER CIS review, the current configuration is good and is followed eslewhere in the refinery. Review was done by Chuck Griffin..	12/31/2006	Griffin, Charles T.	Completed

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Latent Condition	436	D&R	DHT	2006	3-25	Does the process control system console layout allow for rapid response to upset situations?	Honeywell system requires 5 actions to make one process move. An operator can only work one page at a time. Multiple operators can work on the system at one time. One person can become overloaded in an emergency situation	Investigate reconfiguring the Honeywell system to allow for more rapid operator response.	<p>I did a quick survey of the current situation with the DCS to familiarize myself with the issue.</p> <p>This issue with the human interface for the Honeywell system is inherent with any DCS that exists. Any process move on the DCS is going to require confirming moves from Operations to insure no mis-entries are made. This protective feature is a basic feature of the product, and it can't be modified by Chevron or any other customer. There is very little we, as product users, can change with this product feature.</p> <p>However, there are current efforts in the Chevron Corporation to create software tools to assist Operations to safely control plants during upset conditions. The Richmond Refinery is currently testing Early Event Detection (EED) software. This software will notify Operations of potential upset conditions in enough time to minimize or even eliminate their effects. The Refinery also has ongoing studies using Transition Management™ software. This software package can automate plant procedures. We are currently testing this software on dryer regeneration procedures at the Penhex plant and for batch switches at RLOP. The software could potentially automate complete startup and shutdown procedures. Other efforts within the Corporation include Safe Park -- a program used to automatically shut down a plant in an upset condition.</p>	8/31/2006	DeMarse, Fredrick W.	Completed

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Latent Condition	437	D&R	DHT	2006	4-66	Is the control room lighting adequate [review direct and indirect lighting]?	There are issues with glare on screens and conflicts with the general area lighting	Review and resolve control room lighting issues	Control house lighting is adequate. If any future control house modifications are done, lighting will be reevaluated as configurations change.	9/30/2006	DeMarse, Fredrick W.	Completed
ISS	529	D&R	DHT	2006	4B5	Reducing vibration?	K-1600 has had a broken rotor shaft due to a vibration problem from scale depositing on the rotor from the steam system	Consider improvements to the 800 # steam system water chemistry.	10/18/2006 -New membranes are being installed in the system and will be completed in 4Q06-1Q07 - Temporary RO polishers installation is scheduled to be completed in mid November 2006 -EBMUD will install a MFRO plant in 2008 to improve water quality--the RO polishers will then not be needed.	7/24/2007	Tehrani-Saber, Robin	Completed
Seismic	403	D&R	DHT	2006		V-1640 and east end of V-1620	Possible corrosion under fireproofing where it is cracked.	Remove fireproofing and inspect for corrosion and repair as required. Write a Passport work request to have the repair work completed. If there are any questions, contact Al Greene (jagr, 2-1788)	Work has been completed, per recommendation.	6/30/2007	Lee, Gerald W.	Completed
Seismic	404	D&R	DHT	2006		E-1610A/B/C/D	Cracks in east end pedestals	Repair cracked areas with grout patch or epoxy injection. Write a Passport work request to have the repair work completed. If there are any questions, contact Al Greene (jagr, 2-1788)	Repairs described above are complete	6/30/2007	Post, Ronald W.	Completed
Seismic	405	D&R	DHT	2006		Fin-Fan Deck	Cracked column pedestals. Spalling on tops of some pipeway beams.	Investigate further to determine scope and cause. Repair with grout patch or epoxy injection. Sam - please contact Al Greene (jagr, 2-1788) for more info on what is needed to perform further inspection. Then write a Passport work request to have preparation work performed in field	Fin fan structural base plate fireproofing replaced on 17 baseplates	6/30/2007	Post, Ronald W.	Completed